



# **U.S. EPA's Combined Heat and Power (CHP) Partnership**

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# Overview

- Climate change
- Background of EPA's CHP work
- EPA's CHP Partnership
  - Goals
  - Brief overview and update
- Questions

# Climate Change Myths

- It will take years to come to scientific and political consensus about what is happening to the climate and what we should do
- Climate change will not affect companies for years
- **NOT TRUE!**
  - the federal, state and local governments in the US are undertaking a myriad of activities
  - other countries are moving forward with regulatory schemes to implement Kyoto
  - many companies and states are taking real action

# U.S. Approach on Climate Change

- Fund new research on science, impacts, breakthrough technologies
- Promote tax credits for clean energy, fuel cell vehicles, sequestration - Climate Strategy, National Energy Plan
- Engage other countries
- Challenge industry to act voluntarily to reduce U.S. emissions intensity 18% by 2012
  - Enhance Dept. of Energy 1605(b) GHG registry
  - *Climate Vision* sector-specific initiatives
  - Company challenges through voluntary partnerships

# Climate Vision Initiative

- Most energy-intensive sectors participating
  - auto manufacturers
  - electricity generators
  - cement manufacturers
  - aluminum manufacturers
  - chemical manufacturers
  - forestry/paper companies
  - petroleum refiners
  - magnesium manufacturers
  - Business Roundtable companies
- A variety of intensity-based goals for 2012



# States are Moving Forward on Climate

- **Growing concern about consequences of climate change**
- **Many states taking action to reduce/report GHGs**
  - **GHG Registries** -- CA, NH, WI, ME, New England, TX, IL, MD, NY
  - **GHG Goals** -- New England, NJ, NY, numerous cities
  - **GHG Mandates** -- CA auto efficiency, MA, OR power plant CO<sub>2</sub> mitigation
  - renewable energy, efficiency, alternative fuel, ag programs
- **Addressing climate change along with other concerns**
  - air quality, congestion/land use, water supply, quality of life

# Other Countries: A Patchwork of Responses

- 104 countries have ratified Kyoto--Russia will bring it into force
- Emissions reduction and trading schemes in development.
  - **Japan** - 6% below 1990, possible carbon tax by 2005
  - **EU** - 8% below 1990, trading scheme begins in '03 for heavy industries (penalty for noncompliance in 2005-08 is 40 Euros/ton CO<sub>2</sub>)
  - **Canada** - 6% below 1990, trading scheme planned with price cap
- Australia and U.S. have said they won't ratify but are pursuing their own climate strategies

# Who We are

- Office of Atmospheric Programs
  - Climate Protection Partnerships Division (voluntary)
    - ENERGY STAR Programs
    - High Global Warming Potential Gases
    - Energy Supply & Industry
      - **Combined Heat and Power Partnership**
      - Green Power Partnership
      - Policy, E-Grid, Climate Leaders



# Clean DER -- the Next Step in Pollution Prevention

**Pollution Rate  
(supply side)**

***Clean DER*  
reduce this**

**X**

**Amount of kWh  
(demand side)**



**reduces this**

**=**

**GHG Emissions**

# EPA's Messages

- We can break the link between rising standard of living and air pollution
- Reliable, efficient energy supply and a clean environment go hand-in-hand
- Technologies and policies are available today

# The CHP Partnership

- Summary
  - EPA's Combined Heat & Power Partnership is a **voluntary partnership** between EPA, the CHP industry, Utilities, and state and local governments designed to foster cost-effective, environmentally beneficial CHP projects
- Vision
  - Achieve implementation of CHP as a cost-effective energy and environmental strategy for industrial companies and others
- Goal
  - 21 gigawatts of new CHP capacity by 2010

# CHP Partnership Agreement

- Partners agree to:
  - Work with EPA to promote the benefits of CHP and support development of new projects
  - Report data on existing & new CHP projects
  - Provide input to EPA developed tools/services
  - Host workshops/other events (states)
- EPA will:
  - Promote understanding/recognition of CHP benefits
  - With partner input, develop tools/services to accelerate project development
  - Provide project-level assistance



# EPA's CHP Partnership - Status

- Launched October, 2001 with 18 Founding Partners
- Now 85 Partners, including:
  - Industrial, commercial, and institutional
  - Project developers, consultants, equipment manufacturers, law firms, financiers
  - Gas and electric utilities
  - State, city, and local governments
- Key agencies/groups: DOE, FEMP, HUD, USCHPA, Regional CHP Initiatives
- Have assisted about 20 CHP projects

# Sample Tools/Services

- Regulatory/Policy Support
  - Educate policymakers on CHP benefits and environmental policies for recognizing them
  - Permitting handbook and project-specific permitting assistance
  - Web-based State Best Practices, links, and analysis
- Public Recognition
  - ENERGY STAR CHP Awards
  - Ribbon-cutting ceremonies
  - Press kits

# Sample Tools/Services - Continued

- Outreach/Education
  - Web-based partner profiles and case studies
    - Public recognition of environmental benefits of Partners' CHP facilities
  - Participation in regional CHP initiatives
  - Catalog of DER technologies
- Market Development
  - Web-based “yellow pages” for service/equipment providers
    - Facilitate networking between users, developers, equipment suppliers, etc.
  - State profiles of CHP installations & opportunities
- Technical
  - Emissions impact calculator
  - On-site technical assistance: feasibility study

# ENERGY STAR CHP Award

- Recognize exceptional CHP facilities
- Requires one year of operating data
- Use 5% less fuel than separate heat-and-power generation





# Past Award Winners

- Cinergy Solutions (in partnership with BP Global Power Corp) in Texas City, Texas
- Primary Energy & National Steel's Midwest Operations
- Primary Energy & U. S. Steel's Gary Works
- The Massachusetts Institute of Technology
- The College of New Jersey
- Dow Chemical Company Texas Operations facility in Freeport, Texas
- Sempra Energy Solutions & Louisiana State University
- Trigen - 5 awards

# Past Certificate Winners

- The University of Maryland
- NiSource Energy Technologies & the Hilton Garden Inn in Chesterton, Indiana
- NiSource Energy Technologies & the Breeden YMCA in Angola, Indiana
- Trigen-Cinergy Solutions of Ashtabula
- City of Russell
- The University of North Carolina at Chapel Hill
- Rutgers University
- Malden Mills
- All Systems Cogeneration

# CHP Partnership - Activity Update

- Participation in output based DER efforts
  - Regulatory Assistance Project ([www.raonline.org](http://www.raonline.org))
  - “output-based regulations: best practices for regulators: white paper with nuts and bolts - what, why and how outreach and support to air regulators
- Draft output based Best Available Control Technology (BACT)
- Draft guidance source determination for CHP
  - Clarifies treatment of third-party CHP facilities providing energy to host
- Quantifying DER emissions impacts

# More Information

- CHP Partners Meeting 30 April to 1 May, 2003 in Washington, DC
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